

**MOSAICS  
INSTALLATION**

**BISAZZA**

MOSAICO

## **BISAZZA TRAINING**

Bisazza's commitment is not limited simply to the creation and manufacture of high quality and prestige materials, or even to the design of products and tools designed to promote flawless mosaic tiling, but is manifested no less in a significant level of attention dedicated to tilers themselves.

A training programme dedicated to these operators is organized around a core element of Bisazza courses, and aimed at coaching professionals to a high level of proficiency. Bisazza has trained more than a thousand tilers over the last five years, from Italy and other countries, and continues today with this steady commitment to the transfer of skills that are indispensable to a full interpretation of the quality and excellence embodied traditionally in its products.

For information on training courses and related initiatives organized by Bisazza for tilers, contact:

**Technical Assistance and Installation Service**  
**e-mail [installation.department@bisazza.it](mailto:installation.department@bisazza.it)**

The Technical Assistance and Installation Service, with its team of experts, is also happy to answer questions and offer solutions on mosaic tiling at any time.

## THE IMPORTANCE OF PROFESSIONAL INSTALLATION

Customer satisfaction depends, not least, on the selection of professional contractors skilled in the art of applying mosaic so that the prestige and value of Bisazza products find their full expression.

Tile Installers play an important role as partners in the process, and this catalogue - a quick guide to the essential ingredients of a professional tiling job - is dedicated to them.

Before proceeding further, however, it would be wise to focus on a few key points that cannot be overlooked if the desired results are to be achieved.

*1) Heated floor. Once the screed has cured, it must be tested before tiling operations can commence. This will usually involve conducting a complete heating/cooling cycle over a period covering a complete week: the heating is turned on at the minimum setting for two days, and the temperature increased thereafter by 5 °C every two days up to the maximum permissible, which is also maintained for two days; then start taking the temperature down 5°C every two days until the minimum is reached, leaving the heating on during the laying. This procedure is necessary in all seasons, including summer.*

- Before starting any job, make a careful assessment of the substrate (plaster, marble, metal, wood, heated floor<sup>1</sup> etc.), remembering that each type of material requires the appropriate preparation
- The substrate must present a perfectly smooth, even surface, and a mature, sound and stable structure. In cases of heated floor, apply an anti-fracture membrane, such as is used for waterproofing.
- To ensure best results, use only products technically and chemically suited to the type of substrate being tiled
- Be sure that the instructions on Bisazza's packaging and technical data sheets are followed to the letter, and apply this general rule for any products used; be especially careful to abide by safety directions
- Boxes of Bisazza mosaic should be transported, carrying and handled in a horizontal position and stored in a dry place, away from water and moisture
- Before applying shading blends or modular decorations, take time to consult Bisazza's layout diagram supplied in each box
- Before mosaic flooring or cladding is adopted for areas permanently in contact with water, it will be advisable to apply a suitable waterproofing treatment to the substrate surfaces (consult makers of chemical products for the building industry)
- Mosaic tiling operations should be carried out in ambient temperatures of between 5 °C minimum and 30 °C maximum
- Remember that a good tile Installer will always lay and fix mosaic in such a way that the tesserae are uniformly spaced one from the next, creating an overall appearance of complete harmony

## TOOLS DERIVED FROM BISAZZA'S EXPERIENCE

The efforts of skilled and expert professionals alone are not enough to ensure ideal results when setting Bisazza mosaics. Special materials and tools are needed. With this in mind, combining the results of its own analysis and research with feedback from Installers, we have formulated a series of special products and designed a number of tools intended specifically to facilitate the process of mosaic tiling and optimize end results.

The **Bisazza Installation Kit**, comprised of two boxes – A and B – was created specifically for residential installations. The Kit contains everything necessary to install 2 m<sup>2</sup> of 20 mm mosaic: Box A contains a 5 kg bag of START high performance white cement base powder, and a 1.8 kg bottle of UP flexible adhesive latex to mix with the START. Box B contains a bucket of Fillgel epoxy grout and a 2 liter bottle of SHINE detergent ready for use with no diluting required.

Some of these components are also available in larger containers for installers working on bigger projects.



## BISAZZA GLASS MOSAIC ADHESIVE



### START 5 Kg + UP 1,8 Kg

Bisazza glass mosaic adhesive for indoor and outdoor use: bathrooms, kitchens, floors, pools, saunas, fountains, etc. For use on cement substrates, smooth render, plasterboard and over compatible waterproofing compounds.

### START

High performance white cement base powder intended exclusively for mixing with **UP**. Zero vertical slippage, extended open time, especially suitable for fixing Bisazza glass mosaic.

### UP

Flexible adhesive latex used to fix Bisazza glass mosaic: intended exclusively for mixing with **START**.

### TYPICAL APPLICATIONS

**START**, mixed exclusively with **UP** flexible latex, is suitable for laying and fixing Bisazza mosaic indoors, outdoors, on heated floors and in environments permanently wet or under water, on the following substrates:

- cement substrates (concrete, smooth render or screed)
- plasterboard treated with primer
- compatible waterproof membranes.

### TECHNICAL SPECIFICATIONS

**START + UP** is a particularly fine white adhesive with the following characteristics:

- mixes to a creamy and easily workable paste
- highly thixotropic: does not run when applied to vertical surfaces or ceilings (no slippage of mosaic)
- optimum adhesion to all building materials in general use
- exact white balance ensures original shades of Bisazza glass mosaic will not be distorted
- tiling operations facilitated by particularly long open time and appreciable adjustment time

### IMPORTANT

- Not recommended for use on second (brown) plaster coats smoothed with a float.
- In the case of particularly absorbent or powdery substrates, the surface should be treated with a primer suitable for the particular situation.
- Not suitable for mosaic tiling on gypsum based substrates, unless suitably primed and stabilized.
- For pools, fountains and other wet areas, wait at least 20 days after tiling before subjecting the mosaic to contact with water.
- **START** - keep dry. Avoid contact with eyes and skin.
- **UP** - protect against frost.

Read the instructions on the pack and consult the safety data sheet before using.

|                         | START   | up                |
|-------------------------|---|-------------------|
| Packaging               | 5 kg paper bags   | 1.8 kg containers |
| Storage                 | 24 months   | 24 months         |
| Mix ratio               | 5 kg <b>START</b> with 1.8 kg <b>UP</b><br>equivalent to 36 parts <b>UP</b> with 100 parts <b>START</b> |                   |
| APPLICATION DATA*       | START + UP  |                   |
| Conformity to standards | EN 12004 Class C2TE S1  |                   |
| Pot life                | 8 hours approx  |                   |
| Application temperature | +5°C to +30°C   |                   |
| Open time               | 30 minutes approx   |                   |
| Adjustment time         | 60 minutes approx   |                   |
| Walk-on                 | 24-36 hours approx  |                   |
| Ready for use           | 14 days<br>(20 days for bathtubs and pools)   |                   |
| Working temperature     | -30°C to +90°C  |                   |

\*At +23°C with 50% R.H.

### WARNING

The information printed above is based on a vast array of experiences and product applications. Such recommendations should be considered general in nature. Individual applications of Bisazza products may vary, and the suitability and application of any such product should therefore be evaluated on a case by case basis.

### BISAZZA ADHESIVES COVERAGE (kg/m<sup>2</sup>)

| SUBSTRATES                          | MOSAIC<br>20x20 mm          | MOSAIC<br>10x10 mm          | OPUS<br>ROMANO              |
|-------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Cement render/screed                | START 2.5 kg<br>+ UP 0.9 kg | START 2.5 kg<br>+ UP 0.9 kg | START 2.5 kg<br>+ UP 0.9 kg |
| Smooth render                       | START 2.5 kg<br>+ UP 0.9 kg | START 2.5 kg<br>+ UP 0.9 kg | START 2.5 kg<br>+ UP 0.9 kg |
| Plasterboard<br>treated with primer | START 1.8 kg<br>+ UP 0.6 kg | START 1.8 kg<br>+ UP 0.6 kg | START 1.8 kg<br>+ UP 0.6 kg |
| Reinforced concrete                 | START 2.5 kg<br>+ UP 0.9 kg | START 2.5 kg<br>+ UP 0.9 kg | START 2.5 kg<br>+ UP 0.9 kg |

## COLOURED GROUT FOR BISAZZA GLASS MOSAICS



### BISAZZA FILLGEL

Special coloured epoxy grout for Bisazza glass mosaic.

### TYPICAL APPLICATIONS

For grouting Bisazza mosaic on floors and walls.

- Suitable for indoor and outdoor use.
- Suitable for damp and permanently wet - environments.
- Especially suitable for pools filled with spa or salt water, and in situations where total hygiene is required.

### TECHNICAL SPECIFICATIONS

**BISAZZA FILLGEL** is a thixotropic two-part product formulated from epoxy resins, silica sand and special additives, with excellent resistance to wear. Easy to apply and easy to clean.

The following advantages are obtained when used correctly:

- a smooth and compact finished surface
- uniform colours, resistant to weathering agents
- water repellency
- optimum hardness and ability to withstand heavy traffic
- no shrinkage, hence no cracks or crazing
- excellent bonding.

### IMPORTANT

- Avoid using Fillgel for grouting mosaic tile floors and walls exposed continuously to oleic acid attack.
- Be certain to leave structural and/or expansion joints ungrouted; these should be filled with suitable sealants.
- **BISAZZA FILLGEL** does not have waterproofing properties.
- Do not dilute **BISAZZA FILLGEL** with water or any kind of solvent to render it more workable: this will inevitably have an adverse effect on the performance of the product.
- The components are pre-measured in the correct proportions to hinder errors. Do not attempt to mix less than the complete containers.
- Pale colours are likely to yellow if used outdoors.
- Slight variations in colour can occur from one batch of material to another.
- Open and adjustment times vary significantly with different ambient and substrate conditions.
- Do not use alcohol to clean.

### SAFETY

- Professional grade product.
- Keep out of the reach of children.
- Irritant for eyes, respiratory tract and skin.
- May cause irritation in contact with skin.
- In the event of contact with eyes, wash immediately with plenty of water and consult a doctor.
- Use protective clothing, gloves and goggles.
- Use only in well-ventilated areas.
- Toxic to aquatic organisms.
- This material and its containers must be disposed of at collection points for hazardous or special waste.

Read the instructions on the pack and consult the safety data sheet before using.

|                               |   |
|-------------------------------|---|
| <b>APPLICATION DATA*</b>      |   |
| Packs                         | Part "A" and Part "B" a total of 3 kg, to be mixed at time of use |
| Shelf life                    | 24 months in original packs/containers stored in a cool dry place |
| <b>APPLICATION DATA*</b>      |   |
| Conformity to standards       | EN 13888 Class RG   |
| Mixing proportions            | Part A: Part B = 2 : 1  |
| Max. washable time            | 45 minutes from the time of mixing                                |
| Application temperature       | from +12°C to +30°C   |
| Walkable                      | 24 hours. Longer times at lower temperatures **                   |
| Able to bear weight           | 4 days. Longer times at lower temperatures **                     |
| Operational temperature range | from -20°C to +100°C  |

\*at + 23°C and 50% RH. \*\*Do not allow water to pool on the surface.

### WARNING

Whilst the information and directions given above are based on the experience of Bisazza to date, they must be taken nonetheless as purely indicative. Always check that the product is suitable for the intended application before proceeding to use it. The user assumes all liabilities deriving from utilization of the product.

### BISAZZA FILLGEL COVERAGE (kg/m<sup>2</sup>)

|  | MOSAIC<br>20x20 mm | MOSAIC<br>10x10 mm | OPUS<br>ROMANO |
|--|--------------------|--------------------|----------------|
| Up to 20 m <sup>2</sup><br>(kg/m <sup>2</sup> )      | 1,5                | 1,5                | 3              |
| From 20 to 60 m <sup>2</sup><br>(kg/m <sup>2</sup> ) | 1,4                | 1,4                | 2,8            |
| More than 60 m <sup>2</sup><br>(kg/m <sup>2</sup> )  | 1,3                | 1,3                | 2,6            |

## **SPECIAL DETERGENT FOR BISAZZA GLASS MOSAIC**



### **SHINE**

Special detergent for Bisazza glass mosaic. **Ready to use.** Specially formulated for cleaning **BISAZZA FILLGEL** epoxy grout.

Does not develop toxic or aggressive vapours. Cleans thoroughly without damaging the natural mosaic finish. Cleans gaps grouted with **BISAZZA FILLGEL** without damage.

### **IMPORTANT**

Do not use on porous surfaces.

When using SHINE near porous materials, protect them carefully against all risk of contact with SHINE, even dilute solutions.

Always test the action of SHINE on any surfaces other than glass mosaic grouted with **BISAZZA FILLGEL**.

### **PACKAGING AND COVERAGE**

**SHINE** comes in 2 litre containers.

Cleaning **BISAZZA FILLGEL**: 1 litre of **SHINE** ready to use cleans about 1 square metre of mosaic.

### **STORAGE**

Stored in a dry place in the original container, **SHINE** ready to use has a shelf life of about 36 months.

### **WARNINGS**

- Professional grade product.
- Do not mix with other chemicals.
- Do not mix with other products.
- Store out of the reach of children. Do not swallow. If swallowed, consult a doctor immediately and show the container or label. In the event of contact with the eyes, wash immediately with plenty of water and consult a doctor. Keep the product in its original container.

### **LIABILITY**

Whilst the information given above reflects the best experience of the Bisazza company to date, it is nonetheless purely indicative and must always be verified beforehand.

Before using the product, always ascertain whether or not it is suitable for the application. Users assume all responsibility for damage resulting from inappropriate applications.

## BISAZZA TOOLS AND ACCESSORIES FOR LAYING AND FIXING MOSAIC

The same strategy that underlies the development of Bisazza mosaic tiling materials has also led the company to design specific tools and accessories. To order them please contact your Bisazza representative or local Bisazza dealer.

In particular, these tools are: notched trowel suitable both for skimming and for spreading tile adhesive; small trowel for adjusting gaps; float used to ensure firm bonding of mosaic tesserae to walls; nippers and diamond disc, essential for cutting mosaic tesserae; open-pore cellulose sponge, polyester felt pad for cleaning.

### CELLULOSE SPONGE



#### SPONGE

Special open-pore cellulose sponge. Designed for smoothing **BISAZZA FILLGEL** grout after excess has been wiped off with the **BISAZZA SCRUB** felt pad.

#### DIRECTIONS FOR USE

Used to remove facing paper from mosaic, and for cleaning **BISAZZA FILLGEL** during grouting.

**Consumption:** Approximately one Sponge per bucket of Fillgel.

### SPECIAL POLYESTER FELT PAD



#### SCRUB

Special white polyester felt pad used to remove excess **BISAZZA FILLGEL** during grouting operations.

#### DIRECTIONS FOR USE

Before the grout starts to harden, wet the **BISAZZA SCRUB** felt pad in **BISAZZA SHINE** and, without wringing, pass several times over the tesserae with a circular motion until the excess grout on the surface of the mosaic is emulsified completely. Wet the **BISAZZA SCRUB** felt pad whenever the emulsion does not form easily. Thereafter, wipe off all excess with the Bisazza Sponge.

**Consumption:** Approximately one Scrub per bucket of Fillgel.





## BISAZZA GLASS MOSAIC ADHESIVE



### START 25 Kg + UP 9 Kg

Bisazza glass mosaic adhesive for indoor and outdoor use: bathrooms, kitchens, floors, pools, saunas, fountains, etc. For use on cement substrates, smooth render, plasterboard and over compatible waterproofing compounds.

### START

High performance white cement base powder intended exclusively for mixing with **UP**. Zero vertical slippage, extended open time, especially suitable for fixing Bisazza glass mosaic.

### UP

Flexible adhesive latex used to fix Bisazza glass mosaic: intended exclusively for mixing with **START**.

### TYPICAL APPLICATIONS

**START**, mixed exclusively with **UP** flexible latex, is suitable for laying and fixing Bisazza mosaic indoors, outdoors, on heated floors and in environments permanently wet or under water, on the following substrates:

- cement substrates (concrete, smooth render or screed)
- plasterboard treated with primer
- compatible waterproof membranes.

### TECHNICAL SPECIFICATIONS

**START + UP** is a particularly fine white adhesive with the following characteristics:

- mixes to a creamy and easily workable paste
- highly thixotropic: does not run when applied to vertical surfaces or ceilings (no slippage of mosaic)
- optimum adhesion to all building materials in general use
- exact white balance ensures original shades of Bisazza glass mosaic will not discolour
- tiling operations facilitated by particularly long open time and appreciable adjustment time

### IMPORTANT

- Not recommended for use on second (brown) plaster coats smoothed with a float.
- In the case of particularly absorbent or powdery substrates, the surface should be treated with a primer suitable for the particular situation.
- Not suitable for mosaic tiling on gypsum based substrates, unless suitably primed and stabilized.
- Wait at least 20 days after tiling before the mosaic is exposed to contact (whether intentional or accidental) with water, in the case of permanently damp surroundings.

- **START** keep dry. Avoid contact with eyes and skin.
- **UP** protect against frost.

Read the instructions on the pack and consult the safety data sheet before using.

|                         | START  | up              |
|-------------------------|--|-----------------|
| Packaging               | 25 kg paper bags   | 9 kg containers |
| Storage                 | 12 months  | 24 months       |
| Mix ratio               | 25 kg <b>START</b> with 9 kg <b>UP</b><br>equivalent to 36 parts <b>UP</b> with 100 parts <b>START</b> |                 |
| APPLICATION DATA*       | START + UP   |                 |
| Conformity to standards | EN 12004 Class C2TE S1   |                 |
| Pot life                | 8 hours approx   |                 |
| Application temperature | +5°C to +30°C  |                 |
| Open time               | 30 minutes approx  |                 |
| Adjustment time         | 60 minutes approx  |                 |
| Walk-on                 | 24-36 hours approx   |                 |
| Ready for use           | 14 days<br>(20 days for tubs and pools)  |                 |
| Working temperature     | -30°C to +90°C   |                 |

\*At +23°C with 50% R.H.

### WARNING

The information printed above is based on a vast array of experiences and product applications. Such recommendations should be considered general in nature. Individual applications of Bisazza products may vary, and the suitability and application of any such product should therefore be evaluated on a case by case basis.

### BISAZZA ADHESIVES COVERAGE (kg/m<sup>2</sup>)

| SUBSTRATES                          | MOSAIC<br>20x20 mm          | MOSAIC<br>10x10 mm          | OPUS<br>ROMANO              |
|-------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Cement render/screed                | START 2.5 kg<br>+ UP 0.9 kg | START 2.5 kg<br>+ UP 0.9 kg | START 2.5 kg<br>+ UP 0.9 kg |
| Smooth render                       | START 2.5 kg<br>+ UP 0.9 kg | START 2.5 kg<br>+ UP 0.9 kg | START 2.5 kg<br>+ UP 0.9 kg |
| Plasterboard<br>treated with primer | START 1.8 kg<br>+ UP 0.6 kg | START 1.8 kg<br>+ UP 0.6 kg | START 1.8 kg<br>+ UP 0.6 kg |
| Reinforced concrete                 | START 2.5 kg<br>+ UP 0.9 kg | START 2.5 kg<br>+ UP 0.9 kg | START 2.5 kg<br>+ UP 0.9 kg |

## SPECIAL DETERGENT FOR BISAZZA GLASS MOSAIC



### SHINE PRO

Special detergent for Bisazza glass mosaic.  
Specially formulated for cleaning **BISAZZA FILLGEL** epoxy grout.  
Also suitable for regular maintenance of glass mosaic surfaces in public buildings.

Does not give off toxic or noxious fumes. Cleans thoroughly without damaging the mosaic finish. Cleans joints grouted with **BISAZZA FILLGEL** without causing damage.

### IMPORTANT

Do not use SHINE PRO on limestone or marble surfaces.  
When working near limestone and/or marble based materials, protect them carefully against any risk of contact with **SHINE PRO**, even in diluted solutions.

### WARNINGS

Professional grade product.  
Given the high cleaning power of **SHINE PRO**, incorrect use can lead to premature corrosion of cement based grout.  
Test the action of SHINE PRO on any surfaces other than Bisazza glass mosaic grouted with **FILLGEL**.  
Read the safety data sheet before using. Contact the BISAZZA Technical Assistance and Installation Service for information on special applications.  
Keep out of the reach of children.  
Do not mix with other chemicals.

### PACKAGING AND COVERAGE

**SHINE PRO** comes in 2 litre bottles.  
Cleaning **BISAZZA FILLGEL**: 1 litre of **SHINE PRO** cleans about 10 square metres of mosaic.

### STORAGE

Stored in a dry place in the original bottle, **SHINE PRO** has a shelf life of about 36 months.

### LIABILITIES

Whilst the information and directions given above reflect the best experience of the Bisazza company to date, they are nonetheless purely indicative and must always be verified beforehand.  
Before using SHINE PRO, always ascertain whether or not it is suitable for the application. Users assume all responsibility for damage resulting from inappropriate applications.

## LAYING AND FIXING INSTRUCTIONS

## LAYING AND FIXING 20x20 mm MOSAIC BACK-MOUNTED ON MESH



### 1 CHECKING THE MATERIAL

Before starting work, be careful to check the boxes containing the sheets of Bisazza mosaic and ensure that there is sufficient material to complete the job. Every box indicates the production batch number, colour, order number and other details to be quoted in the event that more of the same material is needed.

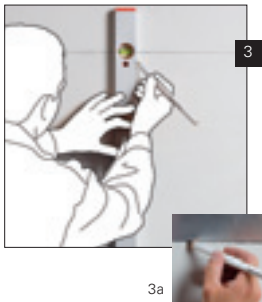
1a



### 2 SKIMMING

This is a step that serves to render the substrate selected for tiling perfectly smooth, uniform and white (a substrate showing differences in colour will spoil the appearance of the finished mosaic). In the case of plaster, use Bisazza adhesive, mixing **Start** and **Up** fluid in the recommended proportions. Before skimming plasterboard with adhesive, the surface needs to be sealed with a coat of suitable primer (consult makers of chemical products for the building industry). Having prepared the adhesive mix, spread uniformly using a plain trowel (steel float). The skim coat should dry for at least 12 hours.

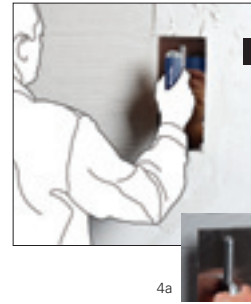
2a



### 3 STARTING LINES

Draw lines on the surface of the substrate to aid correct positioning of the sheets. Lay three sheets out on the floor side by side, so that the gap between the sheets is the same as the gap between the single tesserae, and measure the overall width. Transfer this measurement both horizontally and vertically to the surface being covered and, using a straightedge and a spirit level, mark out a grid. The area will now be divided into a number of squares, each corresponding to nine sheets of mosaic.

3a



### 4 PREPARING THE ADHESIVE

Prepare the Bisazza adhesive by mixing together Start and Up, and spread over an area no larger than will be occupied by the first nine sheets, using the **Bisazza** 3.5 mm notched trowel. First apply a first thick coat with the smooth edge of the trowel, then add a second layer using the notched edge of the tool, drawing the teeth across evenly and "combing" the adhesive to produce a uniformly ridged bed. The sheets can now be positioned.

4a



### 5 LAYING AND FIXING

The sheets are back-mounted to a mesh that should be directly applied to the bed of adhesive. On walls, the thicker strands of mesh should be positioned vertically. Please note: the joints between sheets must be the same as the joints between single tesserae, so that the gaps cannot be detected in the finished mosaic.

5a



### 5.1 A FIRM BOND

With the sheets in place, tap the tesserae home with the **Bisazza float** so that the mesh beds firmly into the adhesive.

5.1a



### 6 ADJUSTING THE GAPS

With all the sheets laid or fixed, and before the adhesive begins to set, the distance between tesserae can be adjusted to ensure that all gaps are of uniform width. This is done by cutting through the mesh along the gap with a knife and edging the adjoining tesserae marginally closer together or farther apart with the aid of the **Bisazza small trowel**. This is a step of the mosaic tiling procedure that calls for patience, but one that also adds considerable value to the finished job. Allow 24 hours for the adhesive to set.

6a

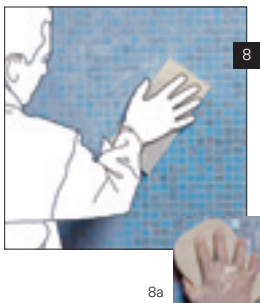


7

### GROUTING

Before grouting, remove any excess adhesive from the gaps with a knife, vacuum the joints and clean the surface to remove any dust or traces of glue. Then prepare the **Bisazza Fillgel** epoxy grout by pouring the entire contents of the hardener pack ("Part B") into the paste ("Part A"). Make sure to use all of the hardener. Mix the two parts together until they are fully blended and apply immediately. Using the small trowel, scoop the grout, a little at a time, onto the Bisazza float and begin applying to the mosaic. Move the tool diagonally across the tesserae, first from the bottom up and then squeegeeing downwards in the opposite direction, making certain that all of the joints are completely filled and that no excess remains. Wear suitable clothing and protective gear.

7a



8

### CLEANING

Once the grout has been applied, and before it begins to harden, begin the cleaning process using the **Shine** detergent (ready to use). Prepare a bucket with this product and immerse the **Scrub** and, without wringing it out, pass it over the surface several times using a circular motion to emulsify the excess grout and smooth the joints. Next, dip the **Sponge** in a bucket of clean water and pass it over the surface of the mosaics to remove any residue of grout or Shine.

8a



To remove grout haze and leave the mosaic shiny, repeat the steps above after a few hours. It is important to always use clean water for the final step of the process.

9

### MAINTENANCE

For daily cleaning, we suggest common neutral detergents. Do not use wax, oil, hydrofluoric acid or phosphoric acid (or orthophosphoric acid) or products that contain them.

For extra cleaning to remove lime deposits, we recommend using a slightly acidic detergent while in all other cases basic products should be used in the ways and amounts suggested by the manufacturers, rinsing immediately and multiple times with plenty of clean water.

## LAYING AND FIXING 20x20 mm PAPER FACE-MOUNTED MOSAIC

The only difference between this and the mesh-backed mosaic previously discussed is **the way it is mounted**. In this case the tesserae are adhered to a **special paper** that calls for particular handling and removal procedures. The paper, which serves to protect the face of the tesserae, is not applied to the setting material. The steps for applying the skim coat through the application of the adhesive are the same as for the mesh-backed mosaics. The rest of the procedure continues below from step 5.

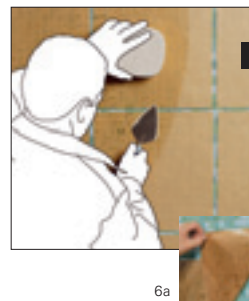


5

### LAYING AND FIXING

To facilitate correct fixing, inspect the paper carefully: it shows lines that should be oriented generally in the same direction, which in the case of wall-fixing is preferably vertical. The sheets are therefore laid or fixed applying the tesserae directly to the adhesive, with the paper facing the tile Installer. Be sure to check the gaps between sheets: these must be the same as the gaps between single tesserae, so that with the mosaic in place, the overall effect will be one of complete harmony. With the sheets in place, tap the tesserae home with the **Bisazza float** and smooth over with the Bisazza small trowel, to ensure a firm bond and a surface without ridges or depressions.

5a



6

### REMOVING THE PAPER

To remove the paper from the tesserae, wet the **Bisazza Sponge** with water and swab the paper repeatedly until it begins to separate easily from the surface of the mosaic. Handle gently at this stage, as the adhesive is still fresh. Peel the paper from the surface pulling diagonally from the bottom up, being careful not to disturb the tesserae.

6a



7

### ADJUSTING THE GAPS

In the same way as for mesh-backed mosaic, once all the sheets have been laid or fixed and before the adhesive begins to set, the distance between tesserae can be adjusted to ensure that all gaps are of uniform width. This is done using the **Bisazza small trowel** to edge the adjoining tesserae marginally closer together or farther apart. This is a step of the mosaic tiling procedure that calls for patience, but one that also adds considerable value to the finished job.

7a

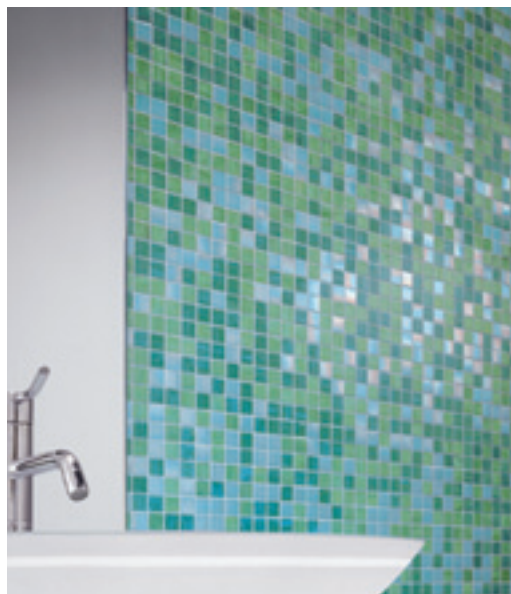




## 8 PREPARING TO GROUT

After 24 hours, remove any excess adhesive from the gaps with a knife and wet the mosaic surface using the Bisazza Sponge soaked in lukewarm water to remove residual traces of glue left by the paper. Repeat the operation as many times as necessary to leave the tesserae thoroughly clean. Take care to ensure that water does not collect in the ungrouted gaps. The mosaic is now ready for grouting and subsequent cleaning (these steps are the same as for mesh-backed mosaic).

8a



## LAYING AND FIXING 10x10 mm PAPER FACE-MOUNTED MOSAIC

The difference between this mosaic and those discussed on the previous pages is the **size of the tesserae**, which in this instance are one-fourth as big, measuring 10 mm on each side. The dimensions of the sheets remain the same, there are simply a greater number of tesserae per sheet compared to the 20x20 mm size. Starting from **inspection of the material** and up to **preparation of the adhesive**, the steps are the same as described for mesh-backed sheets: steps 1 to 4; accordingly, the description here starts from step 5.



## 5 LAYING AND FIXING

All of the steps – from skimming to cleaning – are performed in the same way as described on the previous pages. Take extra care when spreading the adhesive (**Start + Up**), ensuring it will not be squeezed out between the tesserae, and once the paper is sufficiently wet, remove very gently, exercising particular caution.

5a



## 6 ADJUSTING THE GAPS

The step of checking and adjusting the width of the gaps, again using the **Bisazza small trowel**, will call for extra precision. Wipe down the mosaic surface thoroughly with Bisazza Sponge soaked in lukewarm water to remove residual traces of glue left by the paper, making certain that water does not collect in the gaps. For grouting (step 7) and cleaning (step 8), refer to the directions already given for mesh-backed mosaic.

6a





## LAYING AND FIXING PAPER FACE-MOUNTED OPUS ROMANO 12x12 mm



Whether laying mosaic floor or fixing to walls, the steps of the procedure for Opus Romano are the same as described previously for the application of paper-faced mosaic. We recommend **slicing** the paper **into strips 2 - 3 tesserae wide** in the same direction as the lines on the paper, before wetting the paper.



## LAYING AND FIXING 20X20 mm SHADING BLENDS BACK-MOUNTED ON MESH



Shading blends feature a series of mix sheets (modules) with colours ready-graded by Bisazza. Each module is composed of eight sheets - **numbered 1 to 8** - shaded from light to dark.

The packs of material are accompanied by a **layout diagram** that should be consulted before proceeding with application. The steps of the actual tiling procedure are exactly as indicated for 20x20 mm mosaic back-mounted on mesh.



## LAYING AND FIXING 10x10 mm PAPER-FACED MODULAR DECORATIONS



The decoration pictured here is a modular type. Each module includes a number of sheets making up the pattern, which is repeatable as appropriate for the surface being covered. To make the job easier, each sheet of mosaic is numbered and marked with an arrow on the paper side to indicate the correct orientation. Nonetheless, it is advisable to make a "dry run" before any tiling is done, in other words, set out the sheets without fixing them, to gauge the overall effect of the decoration and check that the quantity of material is sufficient. As regards laying and fixing operations, follow the same procedures as indicated for standard Bisazza paper-faced and mesh-backed mosaic of the same basic type. Likewise in this instance, if the overall harmony of the mosaic is not to be spoiled, be certain to inspect and adjust the gaps so that the distance between adjoining sheets and between single tesserae is the same all over the mosaic.



When using modular decorations - given the complexity of the pattern - it is very important to **follow the layout diagram carefully**. A diagram is included in each box of material.



## FINISHING

This document proposes several procedures for finishing the laying of mesh and/or paper-mounted mosaic. The type of mosaic support is not binding and both paper and mesh have been utilised in the various situations irrespective of the type of application illustrated. As always, these activities must follow on the various operations illustrated in the previous pages, starting from preparation of the substrate and skimming. However, we wish to highlight several points with reference to adhesive application. The adhesive must always be soft and moist: apply the adhesive with a trowel at an angle of 45° with respect to the substrate and in a perfectly uniform manner to avoid any excessively thick or thin patches. When applying adhesive to walls, it is advisable to work in a horizontal direction for the final "combing" pass with the trowel. Pay attention during the application process and ensure that the adhesive adheres perfectly to the substrate: it is good practice to blend the adhesive into the substrate before the final pass with a notched trowel. Finally, remember that when covering areas subject to the permanent presence of water (basins and swimming pools) it is advisable to use a product with waterproofing properties.

## LOW WALLS AND 90° CORNERS



### 1 LAYING

First of all make sure the corner line is straight and the faces are perfectly square. To perform this check place two tesserae on the two faces at 90 degrees: since the tesserae edges are bevelled they should match perfectly if the angle is precise. After preparing the surface by skimming and applying the Bisazza adhesive, lay the mosaic by placing a sheet or part of a sheet on each side.



### 2 FINISHING

When you have finished laying the mosaic and before the adhesive has cured completely check that the edge tesserae on adjacent faces are perfectly matched and form a precise 90 degree angle. Now proceed with the normal grouting and cleaning operations.

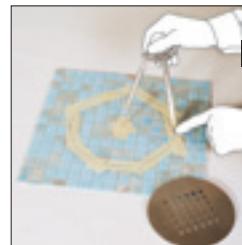


### 3 ROUNDING-OVER OF THE CORNER

When the grout has cured completely the corner should be rounded slightly using a carborundum disc fixed to a flat backing pad with a hook and loop mounting and a low speed angle grinder tool. The grit sequence to be used for this operation is as follows: P120, P180, P220, P360.

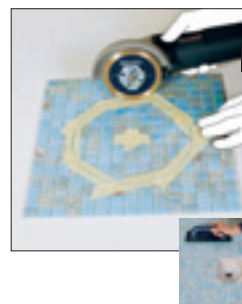


## SHOWER TRAY



### 1 PREPARATION

After having prepared the substrate using a waterproofing product that is compatible with the Bisazza adhesive (consult manufacturers of chemical products for the building trade) and after skimming, lay the mosaic starting from the part surrounding the drain hole. Take a mosaic sheet, place it in the centre of the shower tray and place the drain hole cover on it as a reference; apply masking tape to the mosaic surface around the cover, and then use a compass to draw a circle whose centre is located at the centre of the drain hole cover. The radius of the circle should be one tessera larger than the cover radius plus 5 mm.



### 2 LAYING

Now use the diamond disc to cut the mosaic around the circle you have just drawn; prepare the Bisazza adhesive and start laying the mosaic by placing the sheet with the hole you have just cut in the centre of the shower tray. Continue to place whole sheets around the central sheet with the hole until reaching the edges of the shower tray.



### 3 FINISHING

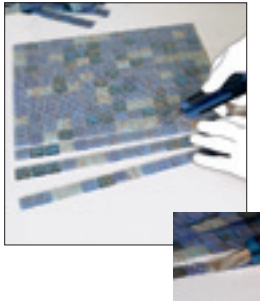
Once you have finished laying the mosaic you must now cover the circle immediately around the drain; prepare individual tesserae and shape them with the nippers, smoothing the edges with the diamond disc, imparting a trapezoidal shape so that they can fit one alongside the other to describe a circular shape. It is important to leave a small gap immediately around the drain hole of approximately 4 mm in width. This gap must be filled with a flexible sealant once the mosaic tesserae have been grouted. The flexible sealant is important to allow for the thermal expansion and contraction of the materials that will occur when the shower is in use. Once all the tesserae have been laid proceed with grouting, cleaning, and application of the sealant.





## STEPS, BENCH SEATS, ROUNDED EDGE

### PRELIMINARY OPERATIONS PREPARATION OF THE TESSERAE STRIPS



Before laying finishing tesserae, if required, it is advisable to prepare the necessary number of mosaic strips, cutting the sheet with a cutter in a vertical direction following the thicker mesh strand. Once the various strips have been cut, trim off the mesh threads that protrude laterally and then arrange the tesserae of each strip, cutting a minimum amount of mesh between one tessera and the next to facilitate the creation of curves on a flat plane.



In the case of paper-mounted mosaic, prepare the material by cutting the sheet into strips of tesserae following the grain, using a smooth trowel. The support must be cut with care, leaving only a small area of paper on the tesserae in such a way that they maintain a certain degree of mobility and can adapt to follow rounded surfaces while they are being laid.

## STEPS



### 1 STARTING LINES

Tiling should always be started from the highest step. Before spreading the Bisazza adhesive it is advisable to make a reference line to aid the work. Using a pencil and a folding ruler, draw a horizontal line on the riser that is parallel to the surface of the first step.



### 2 LAYING

After having spread the adhesive, working in a horizontal direction start laying the mosaic starting from the top of the riser at the height of the pencil line you have just drawn. Continue working upwards, using strips and individual tesserae as necessary.



### 3 ADJUSTING THE TESSERAE

When you reach the tread it is helpful to make a reference to facilitate the job and optimise the quality of the work: to create the reference first lay the strips at the two ends of the surface to be covered. As the uncovered surface area decreases in size use a trowel to spread the adhesive. Use a tile setting trowel to adjust the tesserae to ensure that the gaps are perfectly uniform. Continue with single row laying of the tesserae, starting first from the right of the step and then from the left for the next strip.



#### 4 CUTTING THE TESSERAE

As the laying operation proceeds it will become necessary to fill the small spaces created between one tessera and the next when laying on curved substrates, over corners, or in other specific situations. For this operation use the Bisazza nippers to cut the tesserae to the required size; when the gap to be filled is smaller than one half tessera it is good practice to remove another whole tessera and fill the resulting space by cutting two tesserae to size rather than trying to create a single very small tessera: this approach will produce better aesthetic results. In contrast, if you need to cut across a whole mosaic sheet or if you are following a curved line, first mark the mosaic sheet with a coloured felt-tip pen and then cut it using the Bisazza diamond disc.

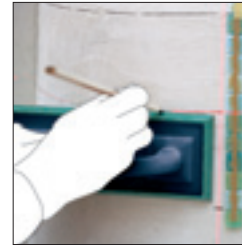


#### 5 THE END RESULT

Continue to lay the mosaic, positioning the tesserae lengthwise on the next step. Proceed in the same manner until you have tiled all the steps. When the job is finished, adjust the positions of the individual tesserae as necessary using the Bisazza tile setting trowel to create uniform gaps. Now proceed with the grouting and cleaning phase as described in the previous pages.

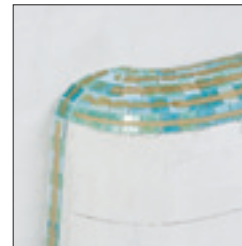


## BENCH SEAT



#### 1 STARTING LINES

After having skimmed the surface, which must be extremely smooth and even, given that the bench seat is a particularly complex shape to cover, start by laying the first two strips of tesserae on the backrest - one horizontal and one vertical as shown in the photo, in such a way as to create the main reference points. Every five vertical tesserae mark a line with a pencil; now use the self-levelling laser to create a reference grid on which to lay the mosaic and then pencil in the horizontal and vertical lines shown by the laser beam.



#### 2 LAYING

Proceed to lay the tesserae starting from a corner: lay one strip of tesserae in a vertical direction and one in a horizontal direction in correspondence with the first line you have drawn. Continue to lay the tesserae proceeding in a horizontal direction, wetting the paper from time to time exclusively with water using the Bisazza sponge: this operation will allow you to move the individual tesserae more easily to adapt them to the shape of the bench seat.



#### 3 THE CURVE AND THE END RESULT

Once you have reached the bottom of the backrest draw the reference lines again and continue laying the tesserae with the same procedure as that utilised earlier. When covering a complex shape like the bench seat the phase of adjustment of the gaps between tesserae is of critical importance. Before the adhesive cures completely use Bisazza's tile setting trowel to adjust the positions of tesserae as necessary. Thereafter you can proceed with the phases already illustrated in the previous pages: removal of the paper, grouting, and final cleaning.



## THE ROUNDED EDGE



### 1 LAYING

After having skimmed the surface and applied the Bisazza adhesive, lay the first two sheets over the rounded section at each side of the corner, so that they can be used as a guide for laying the mosaic on the two faces. Continue laying the mosaic, placing the sheets one below the other in a vertical direction (i.e. in a perpendicular direction with respect to the edge) following the line defined by the first two sheets. Once you have finished this phase continue laying the mosaic in a horizontal direction.



### 2 FINISHING

Once you have finished laying the mosaic along the two sides of the shoulder, you will now have to cover the rounded part. In this case lay the tesserae end to end arranging the previously prepared mosaic strips and then complete the job by inserting individual tesserae, suitably shaped with the nippers, where necessary. Note that all tesserae cut with the nippers must be finished with sandpaper or the diamond disc. You can now proceed with grouting and cleaning in accordance with the normal methods, adopting particular care because of the rounded surfaces.



## QUARTER ROUND COVE



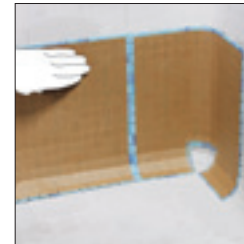
### 1 PREPARATION

The corner must be perfectly square, otherwise the laying procedure will be unnecessarily complex, calling for the use of exceptional skills and increasing the time required. The first phase involves installing an initial sheet without adhesive: place the sheet on the wall in the corner section, count the number of tesserae in the rounded part and make a mark on the paper support with the pencil. In our case there are three tesserae.



### 2 ELIMINATION OF EXCESS TESSERAE

Use the smooth trowel to cut nine tesserae (three down x three across) and place the resulting dry sheet against the wall causing it to slide towards the floor until the two corners of the lower edges come into contact with each other. Use the pencil to draw a perfectly horizontal line above the sheet placed on the wall without adhesive and then use the self-levelling laser to project a grid onto the wall in such a way as to mark the squares on which to proceed with laying of the mosaic.



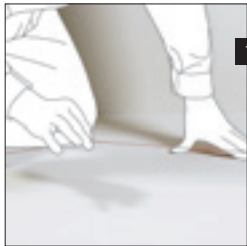
### 3 LAYING

After having applied the adhesive, place the first sheet (the one with the upside-down U shape) in the lower central position and then proceed in a horizontal direction to the right and left. Now proceed along the walls starting next to the sheets that have already been applied in order to keep the joints aligned.

## DECORATIONS FOR SWIMMING POOLS

Before you start laying the mosaic establish the exact position and orientation of the various decorations in the swimming pool in agreement with the customer. Swimming pool decorations are all paper-mounted, while other Bisazza swimming pool mosaics can be either paper- or mesh-mounted. Both types are illustrated below. Because of the application, the substrate must be prepared with a waterproofing product that is compatible with the Bisazza adhesive (consult manufacturers of chemical products for the building trade) and which must be used for skimming before proceeding with any other operations.

### DECORATION AND BLEND WITH PAPER SUPPORT



#### 1 STARTING LINES

Having established the required position of the decoration, take several sheets of the mosaic blend and using the edge of the pool as a reference plot lines at right angles to each other and highlight them using a coloured "line marker". In the case of swimming pools with irregular shapes, the reference lines will be provided by the axes of the decoration.



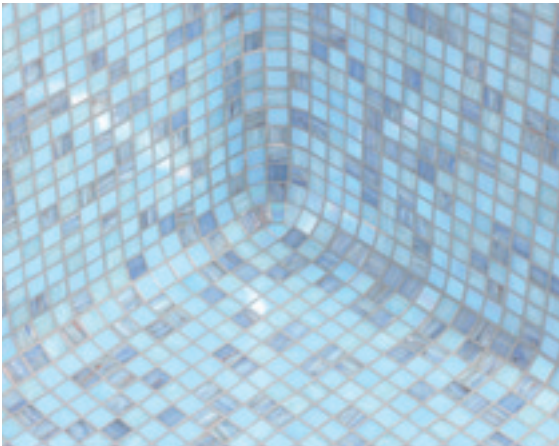
#### 2 DRY LAYING

Lay the various sheets of the decoration dry, i.e. without adhesive, as indicated in the layout diagram. To facilitate the work the sheets are numbered on the paper support, which also features an arrow to show the correct orientation. Continuing with the dry run lay also the blend that surrounds the decoration.

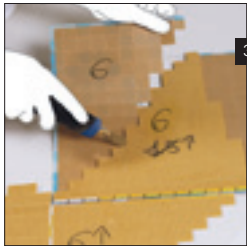


#### 4 FINISHING

The final phase is to complete laying of the mosaic by adding the missing tesserae in the corner. To do this you will need to shape the tesserae carefully so that they adapt perfectly to the surface to be covered. For this operation use an angle grinder equipped with the Bisazza diamond disc. When you have laid the final tesserae proceed with the normal phases of removal of the paper, adjustment of the tesserae positions, grouting, and cleaning.



## DECORATION WITH PAPER SUPPORT AND BLEND WITH MESH SUPPORT



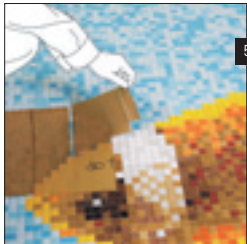
### 3 CUTTING OF SHEETS FOR INSERTION OF THE DECORATION

To match the decoration perfectly with the background of the pool, overlay the blend sheets that surround the decoration to identify the best area to remove excess tesserae. Cut the paper of the sheets with a cutter and lay the blend without adhesive, ensuring it follows the outline of the decoration perfectly. At this point re-number each individual assembled piece so that the layout can be easily reassembled at the time of laying and fixing.



### 4 LAYING

After having laid the blend in accordance with the lines you have plotted, up to the point of the previously prepared decoration, the decoration can be applied in accordance with the new numbering.



### 5 ADDITIONAL PHASES

When the mosaic has been laid proceed with the normal phases of removal of the paper, adjustment of the tesserae, grouting, and cleaning.



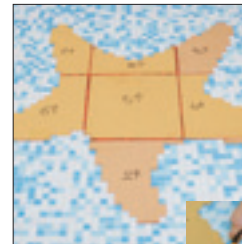
### 1 INITIAL PHASES

With regard to the initial phases, from drawing of the reference lines to the dry laying, the same instructions are applicable as those supplied for paper-mounted mosaic.



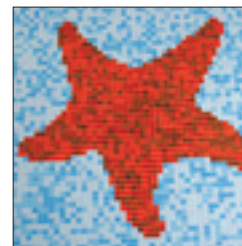
### 2 CUTTING THE SHEETS FOR ADAPTATION TO THE DECORATION

In the case of mosaic with mesh support pay the utmost attention to the phase in which the surplus mosaic is eliminated. This operation must be performed using a cutter. The sheets must be cut with caution to avoid damaging the waterproofing layer of the bottom of the pool. This operation should therefore be performed after placing the mosaic on a sheet of card or a wooden board so that the mesh can be cut without fear of damage. Carefully trim away all the threads protruding from the tesserae.



### 3 ADJUSTING THE GAPS

Once the mosaic has been laid, wet the paper and lift it away, making sure that the tesserae are not moved in the process. To adjust the gaps use the tile setter trowel and – if necessary – cut the mesh with the cutter, taking care not to press too hard on the swimming pool waterproofing layer.



### 4 ADDITIONAL PHASES

Wash the surface and then proceed with grouting and cleaning as illustrated in the previous pages.

